

From: [Mason, Steve](#)
To: wconner@deerparktx.org; jeverett@item.com; [Nicole Bealle](#); kendra.bernhagen@tceq.texas.gov
Cc: matthew.kuryla@bakerbotts.com; [Mike Gaudet](#)
Subject: Information on Community Protective Standards
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Wayne, here is the information on community protective action levels for benzene... please let me know if you have any questions or I can provide any additional information...

IDLH: 500 ppm; (NIOSH, 2016) / 1/10 IDLH used for community protective actions... 50 ppm...

AEGLs (Acute Exposure Guideline Levels)

AEGLs for Benzene (71-43-2)

Exposure Period	AEGL-1	AEGL-2	AEGL-3
10 minutes	130 ppm	2000 ppm	9700 ppm
30 minutes	73 ppm	1100 ppm	5600 ppm
60 minutes	52 ppm	800 ppm	4000 ppm
4 hours	18 ppm	400 ppm	2000 ppm
8 hours	9 ppm	200 ppm	990 ppm

Level 1

- Notable discomfort, irritation, or certain asymptomatic non-sensory effects. However, the effects are not disabling and are transient and reversible upon cessation of exposure.

Level 2

- Irreversible or other serious, long-lasting adverse health effects or an impaired ability to escape.

Level 3

- Life-threatening health effects or death.

Below AEGL Level 1

Airborne concentrations below the AEGL-1 represent exposure levels that could produce mild and progressively increasing but transient and non-disabling odor, taste, and sensory irritation or certain asymptomatic, non-sensory effects. With increasing airborne concentrations above each AEGL, there is a progressive increase in the likelihood of occurrence and the severity of effects described for each corresponding AEGL.

AEGL values represent threshold levels for the general public. As mentioned, that includes susceptible subpopulations, such as infants, children, the elderly, persons with asthma, and those with other illnesses. However, it is recognized that individuals, subject to unique or idiosyncratic responses, could experience the effects described at concentrations below the corresponding AEGL.

How the AEGL's were developed...

<https://www.epa.gov/aegl/process-developing-acute-exposure-guideline-levels-aegls>

ERPGs

(Emergency Response Planning Guidelines)

Chemical	ERPG-1	ERPG-2	ERPG-3
Benzene (71-43-2)	50 ppm	150 ppm	1000 ppm

Emergency Response Planning Guidelines (ERPG). The American Industrial Hygiene Association publishes these limits that are actually a series of three limits for each chemical. The limits, ERPG-1, ERPG-2, and ERPG-3, represent estimates of progressive levels where certain types of health effects would occur. They are defined as follows:

- ERPG-1. The maximum airborne concentration below which it is believed that nearly all individuals could be exposed for up to 1 hour without experiencing other than mild transient adverse health effects or perceiving clearly defined, objectionable odor.
- ERPG-2. The maximum airborne concentration below which it is believed that nearly all individuals could be exposed for up to 1 hour without experiencing or developing irreversible or other serious health effects or symptoms which could impair an individual's ability to take protective action.
- ERPG-3. The maximum airborne concentration below which it is believed that nearly all individuals could be exposed for up to 1 hour without experiencing or developing life-threatening health effects.

With Regards, Steve



Stephen Mason
EPA Region 6 (88F-PF)
1445 Ross Avenue, Dallas, TX 75202
214-685-2276
mason.steve@epa.gov

"Frequently, my thoughts get bored and walk down to my mouth. Often, this is a bad thing."